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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/018,305	08/21/2002	Bernard Krone	F-7258	7927

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EXAMINER

TORRES, ALICIA M

ART UNIT	PAPER NUMBER
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3671

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,305

Applicant(s)

KRONE ET AL.

Examiner

Alicia M Torres

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-11, 33-38, 41, 45-47 and 49-62 is/are rejected.
- 7) ☒ Claim(s) 5-7, 12-32, 39, 40, 42-44, 48 and 63 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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Claim Objections

1. Claim 4 is objected to because of the following informalities: “one of in one piece” is unclear in line 4. Appropriate correction is required.

Claim 39 is objected to because of the following informalities: there is lack of antecedent basis for “the flat bodies”, “the projections” and “the deflection shield”. Appropriate correction is required.

Claim 40 is objected to because of the following informalities: there is lack of antecedent basis for “the counter-knives” and “deflection shield”. Appropriate correction is required.

Claim 37 is objected to because of the following informalities: there is lack of antecedent basis for “the arcuate segments”, “the flat bodies”, and “the bearings”. Appropriate correction is required.

Claim 54 is objected to because of the following informalities: claim 54 also has instances of lack of antecedent basis. Appropriate correction is required.

DETAILED ACTION

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-4, 8, 9, 33, 34, 38, 41, 45, 46, 49, 50-55, 58, 59, 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan et al., hereafter Morgan, in view of Jauss, Quick, and Smith '395.

4. Morgan discloses a harvesting apparatus for harvesting stalked plants, comprising at least one circulating endless conveyor (25) which leads cut stalks to a delivery area (at 100) at an end of a working strand thereof for delivering harvested plants to an inlet opening (at 60) of a further processing apparatus (3), the endless conveyor (25) comprising conveyor links (150) articulated to one another, the conveyor links (125) including outwardly pointing cutting means (42) disposed on at least one cutting plane and outwardly pointing cut stalk holding means (155, 156, 178, 179) for holding the cut stalks disposed on at least one holding plane (see figures 7 and 10) which is disposed above the at least one cutting plane (42), as per claim 1; and

wherein the at least one holding plane (unnumbered) includes upper and lower holding planes (see figures 7, 8, and 10) both being located above the cutting plane (42), on which respective first and second cut stalk holding means (155, 156, 178, 179) for holding the stalks are disposed, as per claim 2; and

wherein the first cut stalk holding (155) means of the upper holding plane are offset against a line of travel from the second cut stalk holding means (156) of the lower holding plane in an area of the working strand of the endless conveyor (25), as per claim 3; and

wherein the conveyor links of the endless conveyor (25) are made each in integral form, one of in one piece and from parts permanently joined (see links in figure 5), as per claim 4; and

further comprising a frame (10) including a cutting knife (42) carried thereon, the endless conveyor (25) being held by the frame (10) and movable relative thereto, as per claim 8; and

wherein the endless conveyor (25) includes a lower driver (179) at the cutting plane which cooperates with the cutting knife (42) as a counter-knife, as per claim 9; and

wherein each of the conveyor links (150) of the endless conveyor (25) is comprised of two sections (unnumbered) locked to one another, the two sections including upper and lower sections (see figure 7), as per claim 33; and

wherein adjacent links (150) of the conveyor links (150) have swiveling connections, as per claim 34;

wherein the sections of a conveyor link (150) are bolted together, as per claim 38;

wherein the endless conveyor (25) has projections (vertical pins of links) on the conveyor links (150) for engaging drive, as per claim 41;

wherein the at least one conveyor (at 108) includes additional conveyors (at 112) rotating about a common axis of rotation mounted in an area of a drive sprocket (127), as per claim 45;

wherein the conveyor links (150) of the endless conveyor (25) are guided in a movement thereof between driving (163) and idle sprockets (159, 161), as per claim 46; and

wherein the at least one endless conveyor (25) includes two endless conveyors (25, 26) pointing laterally outward and lying essentially next to one another in operation, as per claim 49;

further comprising: a frame (10) on which the endless conveyor (25) is held; and

leaf and plant lifters (205) carried on the frame (10), the lifter comprising a pyramid shaped parting point, as per claim 50; and

wherein each parting point (205) includes a guiding hook which comprises an arm (210) pointing substantially in a conveying direction (see figure 9), as per claim 51;

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wherein the arm (210) extends up to an adjacent leaf and plant lifter (205), as per claim 52;

wherein the guiding hook (210) is resiliently mounted, as per claim 53;

wherein a spring force of the guiding hook (210) is put under tension against a line of travel so as to form a channel between the guiding and the working strand of the endless conveyor (25) to carry the stalked plants counter to the line of travel (see column 6, lines 46-52), as per claim 54;

wherein movable cutting knives (42) are separate from the endless conveyors (25), which are disposed underneath the endless conveyor (25), as per claim 55; and

wherein the cutting means (179) cooperate with the moving cutting knives (42), as per claim 58;

wherein the moving cutting knives (42) freely sever the stalked plants, as per claim 59;

further comprising a fixed counter-knife (178) in the delivery area under which a driver which (179) is located at the at least one cutting plane closely passes and over which an additional driver (156) situated above and parallel to the driver closely passes, as per claim 62.

However, Morgan fails to disclose wherein the lower cutting plane comprising outwardly pointing cutting means is part of an endless conveyor;

a forward portion of each of the conveyor links which faces outwardly in a direction of the cutting means and the cut stalk holding means, and which collectively comprises a front side of the endless conveyor, being structurally configured such that the front side of the endless conveyor is substantially closed to an opposed side thereto, as per claim 1.

Juass discloses a corn harvester wherein the cutting means (6) is part of an endless conveyor. Quick discloses a harvesting mechanism wherein the space between cutting planes (see figure 3) is closed and would prevent debris from entering the working parts of the mechanism. Smith discloses a chain wherein the link face is closed (at 12 in figure 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the conveyor cutting means of Juass on the harvester of Morgan in order to limit drive parts.

Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a closing between the cutting planes in view of the teachings of Quick that a closed face is desirable in harvesting and in view of the teachings of Smith that a closed link face helps to prevent access of dirt to moving parts.

5. Claims 10, 11, are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan, Juass, Quick and Smith as applied to claims 1 and 2 above, and further in view of Bertling.

The device is disclosed as applied above. However, the combination fails to disclose at least one stripper cooperative with the front side of the endless conveyor and with respect to which, the endless conveyor is movable, as per claim 10;

Wherein the at least one stripper is disposed in the delivery area of the endless conveyor, as per claim 11.

Bertling discloses a similar harvester comprising at least one stripper (48) cooperative with the front side of the endless conveyor (13) and with respect to which, the endless conveyor (13) is movable, as per claim 10; and

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Wherein the at least one stripper (48) is disposed in the delivery area (55) of the endless conveyor, as per claim 11.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the stripper of Bertling on the harvester of Morgan, Juass, Quick, and Smith in order to aid in guiding cut crop.

6. Claims 35, 36, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan, Juass, Quick, and Smith as applied to claim 34 above, and further in view of Olinger.

The device is disclosed as applied above. However, the combination fails to disclose wherein the swiveling connection between the adjacent links of the conveyor links includes a pin carried on the upper section on a one of the adjacent links and a bearing to receive the pin in the lower section of an adjacent of the links, as per claim 35; and

Wherein the bearing is one of a sealed rolling bearing and a grooved ball bearing for the swiveling connection, as per claim 36.

Olinger discloses a sickle apparatus wherein the swiveling connection between the adjacent links (16) of the conveyor links includes a pin (62) carried on the upper section on a one of the adjacent links (16) and a bearing (60) to receive the pin (62) in the lower section of an adjacent of the links (16), as per claim 35; and

Wherein the bearing (60) is one of a sealed rolling bearing and a grooved ball bearing for the swiveling connection, as per claim 36; and

Wherein the arcuate segments (68) of the flat bodies (64) form a covering of the bearings (60), as per claim 37.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the bearing of Olinger on the harvester of Morgan, Juass, Quick, and Smith in order to reduce wear.

7. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan, Juass, Quick, and Smith as applied to claims 1 and 2 above, and further in view of Krone et al., hereafter Krone.

The device is disclosed as applied above. However, the combination fails to disclose wherein the conveyor links each includes engaging means provided on a back thereof aligned parallel to a direction of rotation of the endless conveyor and which are receivable into a corresponding recess of a guiding strip.

Krone discloses a harvester wherein the conveyor links each includes engaging means provided on a back thereof aligned parallel to a direction of rotation of the endless conveyor and which are receivable into a corresponding recess of a guiding strip (12, 13, see figure 5 and column 4, lines 27-32).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the guide strips of Krone on the harvester of Morgan, Juass, Quick, and Smith in order to guide the chains.

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8. Claims 56, 57, 60, and 61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan, Juass, Quick, and Smith as applied to claim 55 above, and further in view of van Amstel.

The device is disclosed as applied above. However, the combination fails to disclose wherein the movable cutting knives are configured as revolving disks and are disposed in a plane situated directly under a plane of movement of the endless conveyor and parallel to a path of movement thereof, as per claim 56; and

Wherein working strand of the endless conveyors sweeps over a transport area running transversely across a line of travel and the moving cutting knives configured as revolving disks are arranged side by side and staggered under the transport area, as per claim 57;

Wherein the moving cutting knives are fixedly journaled with respect to the frame holding the endless conveyors, as per claim 60; and

Wherein the moving cutting knives are configured as revolving disks which run in two planes and which overlap one another, as per claim 61.

Van Amstel discloses a harvester wherein the movable cutting knives (7, 8, 11, 12) are configured as revolving disks and are disposed in a plane situated directly under a plane of movement of the endless conveyor (18) and parallel to a path of movement thereof, as per claim 56; and

Wherein working strand of the endless conveyors (18) sweeps over a transport area running transversely across a line of travel and the moving cutting knives (7, 8, 11, 12) configured as revolving disks are arranged side by side and staggered under the transport area, as per claim 57;

Wherein the moving cutting knives (7, 8, 11, 12) are fixedly journaled with respect to the frame (5) holding the endless conveyors (18), as per claim 60; and

Wherein the moving cutting knives (7, 8, 11, 12) are configured as revolving disks which run in two planes and which overlap one another, as per claim 61.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the circular disks of van Amstel on the harvester of Morgan, Juass, Quick, and Smith in order to cut off stalks.

Response to Arguments

9. Applicant's arguments, see Amendment A, filed November 28, 2003, with respect to the rejection(s) of claim(s) 1 and 3 under Morgan et al. in view of Jauss have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Morgan et al., Juass, Quick, and Smith.

Allowable Subject Matter


10. Claims 5-7, 12-32, 39, 40, 42-44, 48, 63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Torres whose telephone number is 703-305-6953. The examiner can normally be reached Monday through Thursday from 7:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at 703-308-3870.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703-305-1113. The fax number for this Group is 703-872-9306.


Thomas B. Will
Supervisory Patent Examiner
Group Art Unit 3671

AMT
February 19, 2004